

Title (en)
DIRECT ANALYSIS SAMPLER

Title (de)
DIREKTANALYSEPROBENNEHMER

Title (fr)
ÉCHANTILLONNEUR D'ANALYSE DIRECTE

Publication
EP 3336514 B1 20230531 (EN)

Application
EP 16203830 A 20161213

Priority
EP 16203830 A 20161213

Abstract (en)
[origin: EP3336514A1] A sampler for taking samples from a molten metal bath, particularly a molten steel bath, includes a sample chamber assembly having a cover plate and a housing. The housing has first and second openings for an inflow conduit and a gas coupler, respectively. The first face of the housing includes a distribution zone, an analysis zone and a ventilation zone. A depth of the analysis zone is greater than 1.5 mm and less than 3 mm. The cover plate and the housing assemble together to form a sample cavity. An analysis surface of a solidified steel sample formed within the sample cavity lies in a first plane. In a flow direction of the molten steel, there are no increases in a width dimension of the sample cavity and a ratio of the length to depth of the sample cavity increases.

IPC 8 full level
G01N 1/12 (2006.01); **G01N 33/205** (2019.01)

CPC (source: BR CN EP KR RU US)
G01N 1/02 (2013.01 - RU); **G01N 1/10** (2013.01 - CN); **G01N 1/125** (2013.01 - BR EP US); **G01N 1/1409** (2013.01 - KR); **G01N 1/20** (2013.01 - US); **G01N 21/01** (2013.01 - CN); **G01N 21/25** (2013.01 - KR); **G01N 33/205** (2019.01 - BR EP US); **G01N 2001/1031** (2013.01 - KR)

Cited by
CN113405847A; EP4215896A1; WO2023138925A1; EP4227669A1; WO2023156131A1; EP3581914A1; US11592363B2; EP4235172A2; US11988581B2; EP3581913A1; EP3693720A1; US11117127B2; US11662277B2; US11660594B2; EP4230990A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3336514 A1 20180620; EP 3336514 B1 20230531; BR 102017026029 A2 20180717; CN 108225822 A 20180629; CN 108225822 B 20200724; ES 2950398 T3 20231009; JP 2018096994 A 20180621; JP 6539716 B2 20190703; KR 102196369 B1 20201230; KR 20180068318 A 20180621; KR 20200006144 A 20200117; PL 3336514 T3 20230918; RU 2680482 C1 20190221; TW 201835551 A 20181001; TW I655418 B 20190401; UA 120783 C2 20200210; US 10466145 B2 20191105; US 2018164193 A1 20180614

DOCDB simple family (application)
EP 16203830 A 20161213; BR 102017026029 A 20171204; CN 201711318098 A 20171212; ES 16203830 T 20161213; JP 2017239037 A 20171213; KR 20170171533 A 20171213; KR 20200002021 A 20200107; PL 16203830 T 20161213; RU 2017143131 A 20171211; TW 106142143 A 20171201; UA A201712298 A 20171212; US 201715838606 A 20171212